RESPONSE

I. Restriction Requirement

The Examiner has determined that the original claims are directed to five separate and distinct inventions under 35 U.S.C. § 121, as follows:

Group I: Claims 1-2, drawn to polynucleotides, classified in class 536, subclass 23.5.

Group II: Claims 3-6, drawn to a method of using a polynucleotide as a probe, classified in class 435, subclass 6.

Group III: Claim 7, drawn to a method of comparing polynucleotide sequences on a computer, classified in class 702, subclass 20.

Group IV: Claim 8, drawn to a 435 embryonic stem cell, clasified in class 435, subclass 325; and

Group V: Claim 9, drawn to a method of making antisera, classified in class 424, subclass 185.1.

II. Response to Restriction Requirement

In response to the Restriction Requirement mailed September 20, 2002 (Paper No. 9), Applicants hereby elect without traverse to prosecute the claim of Group IV (Claim 8), drawn to a 435 embryonic stem cell, classified in class 435, subclass 325. Accordingly, Claims 1-7 and 9 are cancelled without disclaimer and without prejudice as drawn to non-elected inventions. Applicants reserve the right to refile claims to the non-elected inventions in one or more future applications retaining the priority date of the present case and the earlier cited priority applications.

The Applicants' provisionally elect SEQ ID NO:328 for searching purposes. However, the provisional election of SEQ ID NO: 328 is made with traverse since all of the mutated cell lines grouped in original Claim 8 share the structural feature of having been mutated by the mutational insertion of a common genetically engineered vector..

III. Status of the Claims

Claims 1-7 and 9, representing the Group I, II, III, and V inventions, respectively, have been cancelled without prejudice or disclaimer as drawn to non-elected inventions.

No claim within the Group IV invention has been cancelled. In order to better define the invention of the elected Group IV, the claim presently within the Group IV invention has been amended.

Claim 8 is thus presently pending in the case. In compliance with 37 C.F.R. § 1.121(c)(1)(ii), a marked up copy of the original claims is attached hereto as Exhibit A. For the convenience of the Examiner, a clean copy of the pending claims is attached hereto as Exhibit B.

IV. Support for the Claims

Support for amended Claim 8 can be found in the claim as originally filed, and, inter alia, at the last paragraph of page 6 up to the start of Section 5.1. Accordingly, the present amendment is not deemed to constitute new matter.

V. Conclusion

The present document is a complete response to the Restriction and Species Election Requirement. Applicants believe that the claims of the instant application meet all of the conditions for patentability and are in condition for allowance. Accordingly, an early indication of the same is respectfully requested. Should Examiner Brusca have any questions or comments, or believe that certain amendments of the claims might serve to improve their clarity, a telephone call to the undersigned Applicants' representative is earnestly solicited.

Respectfully submitted,

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Date

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Exhibit A

Marked Up Version of Amended Claims-U.S. Patent Application Ser. No. 09/880,711

1 (cancelled). An isolated polynucleotide comprising a contiguous stretch of at least about 60 nucleotides first disclosed in at least one of SEQ ID NOS: 1-1,209.

2 (cancelled). An isolated polynucleotide according to Claim 1, wherein said polynucleotide sequence comprises at least one of SEQ ID NOS: 1-1,209.

3 (cancelled). An *in vitro* process for producing an isolated polynucleotide incorporating a sequence capable of hybridizing to a sequence first disclosed in one of SEQ ID NOS: 1-1,209, comprising the steps of:

a) obtaining a polynucleotide template encoding a sequence capable of hybridizing to an GTS of SEQ ID NOS: 1-1,209;
b) contacting said template with a polynucleotide probe comprising at least about 25 contiguous bases first disclosed in SEQ ID NOS: 1-1,209;
c) processing the combined probe and template to allow the specific detection of the combined probe and template; and
d) isolating a clone encoding said template.

4 (cancelled). The process of Claim 3 wherein said template is mammalian cDNA.

5 (cancelled). The process of Claim 3 wherein said template is mammalian genomic DNA.

6 (cancelled). A process according to Claim 4 wherein said template is of human origin.

7 (cancelled). A process for identifying novel polynucleotide sequences comprising the steps of:

a) retrieving a computer readable representation of a polynucleotide sequence first disclosed in at least one of SEQ ID NOS: 1-1,209, or an amino acid sequence encoded thereby, from a computer addressable form of electronic data storage medium;
b) retrieving a computer readable representation of a test polynucleotide or polypeptide sequence from a computer addressable form of electronic data storage medium; and
c) comparing the sequence of said test polynucleotide or polypeptide sequence to a sequence first disclosed in at least one of SEQ ID NOS: 1-1,209, or an amino acid sequence encoded thereby.

8 (amended). An isolated murine embryonic stem cell line comprising an engineered mutagenic sequence [retroviral gene trap vector] in a[t least one] gene comprising an exon sequence [polynucleotide sequence first] disclosed in [one of] SEQ ID NO[S]: 328 [1-1,209].

9. (cancelled). The use of an mutated mouse comprising a gene trapped allele from Claim 8, to produce a high affinity antibody against a human protein ortholog or homolog of any one of SEQ ID NOS:1-1,209.

Exhibit B

Clean Version of The Pending Claims-U.S. Patent Application Ser. No. 09/880,711

8 (amended). An isolated murine embryonic stem cell line comprising an engineered mutagenic sequence in a gene comprising an exon sequence disclosed in SEQ ID NO: 328.